

THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. **(Currently Amended)** A job scheduling management method for managing schedules of jobs allocated to a plurality of computers connected through a network, comprising the steps of:

monitoring a performance state of a resource of a computer, included in said plurality of computers, to which said jobs have been allocated,

wherein said performance state includes first information indicating at least one of a usage rate of a Central Processing Unit (CPU) included in said computer, an amount of memory being used in said computer, an amount of empty space on a disk storage device included in said computer, an average processing time for the disk storage device, and an average query processing time for a database application being executed by said computer;

determining if said performance state meets a predetermined condition;

if said performance state meets said predetermined condition, detecting a job, of said jobs allocated to said computer, that is uncompleted at a ~~timing~~ time when said predetermined condition is met;

detecting ~~another computer~~ a resource that is available to execute said detected uncompleted job based on second information concerning resources required for executing said detected uncompleted job,

wherein said second information includes an inter-resource distance which is a cost value taken between an execution computer and resources of said plurality of computers, respectively when ~~an the~~ execution computer of said computers uses an available resource included in a plurality of resources

usable by said computers, the cost being defined as a value representing efficiency for use of said resources; and

allocating said detected uncompleted job to said detected ~~other computer~~
resource.

2. **(Canceled)**

3. **(Currently Amended)** A job scheduling management method in a management computer for allocating jobs to a plurality of computers connected through a network and managing a schedule of each of said jobs, comprising the steps of:

managing first information indicating correspondence between a job and a computer to which said job is allocated, second information indicating one or more resources required for executing said job, and third information indicating one or more resources to be used by each of said computers;

monitoring a performance state of a resource of said computer to which said job is allocated,

wherein said performance state includes information indicating at least one of a usage rate of a Central Processing Unit (CPU) included in said computer, an amount of memory being used in said computer, an amount of empty space on a disk storage device included in said computer, an average processing time for the disk storage device, and an average query processing time for a database application being executed by said computer;

determining if said performance state meets a predetermined condition;

detecting an uncompleted job among said jobs allocated to said computers using said first information;

extracting one or more resources required for executing said detected uncompleted job using said second information,

wherein said second information includes an inter-resource distance which is a cost value taken between an execution computer and resources of said computers, respectively when ~~an~~ the execution computer of said computers uses an available resource included in a plurality of resources usable by said computers, the cost being defined as a value representing efficiency for use of said resources;

extracting ~~another computer~~ a resource among said plurality of computers that is available to use said extracted resources using said third information; and

allocating said detected uncompleted job to said extracted other ~~computer~~ resource.

4. **(Currently Amended)** A job scheduling management method as claimed in claim 3, wherein, ~~when the allocating said detected uncompleted job to said extracted other computer,~~ includes rescheduling said job and other jobs having been already allocated to said extracted other ~~computer are rescheduled~~ resource.

5. **(Currently Amended)** A job scheduling management method as claimed in claim 3, further comprising the steps of:

~~when included in the allocating said detected uncompleted job to said extracted other computer,~~ detecting an uncompleted job of said jobs having been already allocated to said extracted ~~another computer~~ other resource using said first information;

extracting one or more further resources required for executing said detected uncompleted job using said second information;

extracting a further computer that is available to use said extracted further resources for said extracted other computer using said third information; and
allocating said detected uncompleted job to said extracted further computer.

6. **(Original)** A job scheduling management method as claimed in claim 3, wherein said management computer allocates one or more jobs to itself.

7. **(Previously Presented)** A job scheduling management method as claimed in claim 3, wherein said management computer further manages information indicating correspondence between said job and a time when said job is to be finished and information indicating a time passed in executing said job, and

wherein if said management computer predicts that said job is not finished in the time when said job is to be finished from the performance state of said computer that executes said job and said time required for executing said job, then determining that said predetermined condition is not met, and allocating the uncompleted job of said jobs allocated to said computer to another computer.

8. **(Currently Amended)** A job scheduling management method as claimed in claim 3, wherein ~~when the allocating said detected uncompleted job to said extracted other computer,~~ includes allocating said detected uncompleted job ~~is allocated~~ to a plurality of other computers among said plurality of computers according to one or more resources required for executing said job.

9. **(Currently Amended)** A job scheduling management computer for allocating jobs to a plurality of computers connected through a network and managing schedules of said jobs, comprising:

management means for managing first information indicating correspondence between a job and a computer to which said job is allocated, second information indicating one or more resources required for executing said job, and third information indicating one or more resources to be used by each of said computers;

monitoring means for monitoring a performance state of a resource of said computer to which said job is allocated,

wherein said performance state includes information indicating at least one of a usage rate of a Central Processing Unit (CPU) included in said computer, an amount of memory being used in said computer, an amount of empty space on a disk storage device included in said computer, an average processing time for the disk storage device, and an average query processing time for a database application being executed by said computer;

means for determining if said performance state meets a predetermined condition;

detecting an uncompleted job among said jobs allocated to said computers using said first information, and extracting one or more resources required for executing said detected uncompleted job using said second information,

wherein said second information includes an inter-resource distance which is a cost value taken between an execution computer and resources of said computers, respectively when ~~an~~ the execution computer of said computers uses an available resource included in a plurality of resources usable by said computers, the cost being defined as a value representing efficiency for use of said resources;

means for extracting another ~~computer~~ resource among said plurality of computers that is available to use said extracted resources using said third

information, and allocating said detected uncompleted job to said extracted other
computer resource.

10. **(Currently Amended)** A computer-readable storage medium storing a job scheduling management program for, upon being executed by a plurality of computer, tangibly ~~performs~~ performing functions including allocating jobs to said computers which are connected to each other through a network and are used by a management computer for managing schedules of said jobs, said job scheduling management program comprising:

a function of managing first information for indicating correspondence between a job and a computer to which said job is allocated, second information indicating one or more resources required for executing said job, and third information for indicating one or more resources to be used by each of said computers;

a function of monitoring a performance state of a resource of said computer to which said job is allocated,

wherein said performance state includes information indicating at least one of a usage rate of a Central Processing Unit (CPU) included in said computer, an amount of memory being used in said computer, an amount of empty space on a disk storage device included in said computer, an average processing time for the disk storage device, and an average query processing time for a database application being executed by said computer;

a function of determining if said performance state meets a predetermined condition;

a function of detecting an uncompleted job of said jobs allocated to said computers using said first information;

a function of extracting one or more resources required for executing said detected uncompleted job using said second information,

wherein said second information includes an inter-resource distance which is a cost value taken between an execution computer and resources of said computers, respectively when an the execution computer of said computers uses an available resource included in a plurality of resources usable by said computers, the cost being defined as a value representing efficiency for use of said resources;

a function of extracting ~~another computer~~ a resource among said plurality of ~~computers~~ resources that enables to use said extracted resources using said third information; and

a function of allocating said detected uncompleted job to said extracted other ~~computer~~ resource.

11. **(New)** A job scheduling management method as claimed in claim 1, wherein the inter-resource distance is renewed by the operating performance of the resource and the execution computer, and the operating performance is detected at the time when a manager computer of said computer instructs a new agent of the execution computer after the new agent is registered.